

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. - 52. (canceled)

53. (currently amended) A catalytic composition for deodorizing or oxidizing purposes, the composition comprising a porous coating on a support, prepared by a process comprising:

(i) applying to the support a coating material comprising:

(1) a polycondensate of:

(A) one or more silanes of formula  $R_aSiX_{(4-a)}$  where each R independently represents a non-hydrolyzable group; each X independently represents a hydroxy group or a hydrolyzable group; and a is 0 or an integer of from 1 to 3 and is greater than 0 for at least 50 mol% of the one or more silanes; or an oligomer derived therefrom;

(B) optionally, one or more compounds of glass-forming elements;

(2) particles having an average diameter of from 1  $\mu m$  to 20  $\mu m$  and comprising transition metal oxides which comprise at least oxides of Mn and Ce and exhibit catalytic activity in at least one of a deodorization and

an oxidation process, a weight ratio of the particles to the polycondensate being from 1:10 to 2:1;

- (ii) thermally treating the applied coating material at a temperature of from 300° C to 400° C to form a coating having a thickness of from 0.01 µm to 500 µm,  
wherein the support is located within, connected to or part of a transport means, a combustion unit, a caravan, a tank, a gas station, a digestion tower of a sewage treatment plant, a composting unit, a manure station, an animal stall, a silo, a waste air unit, a gas mask, or a gas sensor.

54. (currently amended) A catalytic composition for deodorizing or oxidizing purposes, the composition comprising a coating on a support, obtainable by a process comprising:

- (i) applying to the support a coating material comprising:
- (1) a polycondensate of:
- (A) one or more silanes of formula  $R_aSiX_{(4-a)}$  where each R independently represents a non-hydrolyzable group; each X independently represents a hydroxy group or a hydrolyzable group; and a is 0 or an integer of from 1 to 3 and is greater than 0 for at least 50 mol% of the one or more silanes; or an oligomer derived therefrom;
- (B) optionally, one or more compounds of glass-forming elements;
- (2) particles comprising at least one transition metal oxide which exhibits catalytic activity in at least one of a deodorization and an oxidation

process, a weight ratio of the particles to the polycondensate being from 1:10 to 10:1;

(ii) thermally treating the applied coating material to form the coating;

wherein the particles (2) comprise a mixture of oxides of Mn and Ce and

wherein the support is located within, connected to or part of a transport means, a combustion unit, a caravan, a tank, a gas station, a digestion tower of a sewage treatment plant, a composting unit, a manure station, an animal stall, a silo, a waste air unit, a gas mask, or a gas sensor.

55. (canceled)

56. (canceled)

57. (currently amended) A catalytic composition for deodorizing or oxidizing purposes, the composition comprising a coating on a support, obtainable by a process comprising:

(i) applying to the support a coating material comprising:

(1) a polycondensate of:

(A) one or more silanes of formula  $R_aSiX_{(4-a)}$  where each R independently represents a non-hydrolyzable group; each X independently represents a hydroxy group or a hydrolyzable group; and a is 0 or an

integer of from 1 to 3 and is greater than 0 for at least 50 mol% of the one or more silanes; or an oligomer derived therefrom;

(B) optionally, one or more compounds of glass-forming elements;

(2) particles comprising at least one transition metal oxide which exhibits catalytic activity in at least one of a deodorization and an oxidation process, a weight ratio of the particles to the polycondensate being from 1:10 to 10:1;

(ii) thermally treating the applied coating material to form the coating;

wherein the particles (2) comprise a mixture of oxides wherein one or more oxides are present in the following weight percentages:

oxide(s) of Ce: 1 - 70

oxide(s) of V: 5 - 70

oxide(s) of Mn: 20 - 95

oxide(s) of Fe: 20 - 95

oxide(s) of Co: 1 - 50

oxide(s) of Ni: 1 - 50

oxide(s) of Cu: 1 – 95

and wherein the support is located within, connected to or part of a transport means, a combustion unit, a caravan, a tank, a gas station, a digestion tower of a sewage treatment plant, a composting unit, a manure station, an animal stall, a silo, a waste air unit, a gas mask, or a gas sensor.

58. (currently amended) A catalytic composition for deodorizing or oxidizing purposes, the composition comprising a coating on a support, obtainable by a process comprising:

(i) applying to the support a coating material comprising:

(1) a polycondensate of:

(A) one or more silanes of formula  $R_aSiX_{(4-a)}$  where each R independently represents a non-hydrolyzable group; each X independently represents a hydroxy group or a hydrolyzable group; and a is 0 or an integer of from 1 to 3 and is greater than 0 for at least 50 mol% of the one or more silanes; or an oligomer derived therefrom;

(B) optionally, one or more compounds of glass-forming elements;

(2) particles comprising at least one transition metal oxide which exhibits catalytic activity in at least one of a deodorization and an oxidation process, a weight ratio of the particles to the polycondensate being from 1:10 to 10:1;

(ii) thermally treating the applied coating material to form the coating;

wherein the particles (2) comprise at least one of the oxides of La, Ce, Ti, Zr, V, Cr, Mo, W, Mn, Fe, Co, Ni, Cu, Ag, and Zn and have an average diameter of from 1  $\mu m$  to 20  $\mu m$  and wherein the support is located within, connected to or part of a transport means, a combustion unit, a caravan, a tank, a gas station, a digestion tower of a sewage treatment plant, a composting unit, a manure station, an animal stall, a silo, a waste air unit, a gas mask, or a gas sensor.

59. (currently amended) A catalytic composition for deodorizing or oxidizing purposes, the composition comprising a porous coating on a support, obtainable by a process comprising:

(i) applying to the support a coating material comprising:

(1) a polycondensate of:

(A) one or more silanes of formula  $R_aSiX_{(4-a)}$  where each R independently represents a non-hydrolyzable group; each X independently represents a hydroxy group or a hydrolyzable group; and a is 0 or an integer of from 1 to 3 and is greater than 0 for at least 50 mol% of the one or more silanes; or an oligomer derived therefrom;

(B) optionally, one or more compounds of glass-forming elements;

(2) particles comprising at least one transition metal oxide which exhibits catalytic activity in at least one of a deodorization and an oxidation process, a weight ratio of the particles to the polycondensate being from 1:10 to 10:1;

(ii) thermally treating the applied coating material to form the porous coating,  
wherein the support is located within, connected to or part of a transport means, a combustion unit, a caravan, a tank, a gas station, a digestion tower of a sewage treatment plant, a composting unit, a manure station, an animal stall, a silo, a waste air unit, a gas mask, or a gas sensor.

P24820.A10

60. (previously presented) The composition of claim 57, wherein a is greater than 0 for from 50 mol% to 95 mol% of the silanes.

61. (previously presented) The composition of claim 57, wherein the particles have a surface area of from 1 to 100 m<sup>2</sup>/g.

62. (previously presented) The composition of claim 57, wherein the particles have an average diameter of from 10 nm to 20 µm.

63. (previously presented) The composition of claim 57, wherein the coating has a thickness of from 0.01 µm to 500 µm.

64. (previously presented) The composition of claim 57, wherein the support comprises at least one of a metal, a metal oxide, glass, glass ceramic, ceramic and a porous material.

65. (previously presented) The composition of claim 57, wherein a thermal treatment of the applied coating material comprises a treatment at a temperature of from 200° to 700° C.

66. (previously presented) The composition of claim 57, wherein the weight ratio of the particles to the polycondensate is from 1:10 to 2:1.

P24820.A10

67. (previously presented) The composition of claim 66, wherein the weight ratio is from 1:10 to 1:1.

68. (previously presented) The composition of claim 58, wherein a is greater than 0 for from 50 mol% to 95 mol% of the silanes.

69. (previously presented) The composition of claim 58, wherein the particles have a surface area of from 1 to 100 m<sup>2</sup>/g.

70. (previously presented) The composition of claim 58, wherein the coating has a thickness of from 0.01 µm to 500 µm.

71. (previously presented) The composition of claim 58, wherein the support comprises at least one of a metal, a metal oxide, glass, glass ceramic, ceramic and a porous material.

72. (previously presented) The composition of claim 58, wherein a thermal treatment of the applied coating material comprises a treatment at a temperature of from 200° to 700° C.

73. (previously presented) The composition of claim 58, wherein the weight ratio of the particles to the polycondensate is from 1:10 to 2:1.

P24820.A10

74. (previously presented) The composition of claim 73, wherein the weight ratio is from 1:10 to 1:1.

75. (previously presented) The composition of claim 59, wherein a is greater than 0 for from 50 mol% to 95 mol% of the silanes.

76. (previously presented) The composition of claim 59, wherein the particles comprise at least one of the oxides of La, Ce, Ti, Zr, V, Cr, Mo, W, Mn, Fe, Co, Ni, Cu, Ag, and Zn.

77. (previously presented) The composition of claim 59, wherein the particles have a surface area of from 1 to 100 m<sup>2</sup>/g.

78. (previously presented) The composition of claim 59, wherein the particles have an average diameter of from 10 nm to 20 µm.

79. (previously presented) The composition of claim 59, wherein the coating has a thickness of from 0.01 µm to 500 µm.

80. (previously presented) The composition of claim 59, wherein the support comprises at least one of a metal, a metal oxide, glass, glass ceramic, ceramic and a porous material.

81. (previously presented) The composition of claim 59, wherein a thermal treatment of the applied coating material comprises a treatment at a temperature of from 200° to 700° C.

82. (previously presented) The composition of claim 59, wherein the weight ratio of the particles to the polycondensate is from 1:10 to 2:1.

83. (previously presented) The composition of claim 82, wherein the weight ratio is from 1:10 to 1:1.